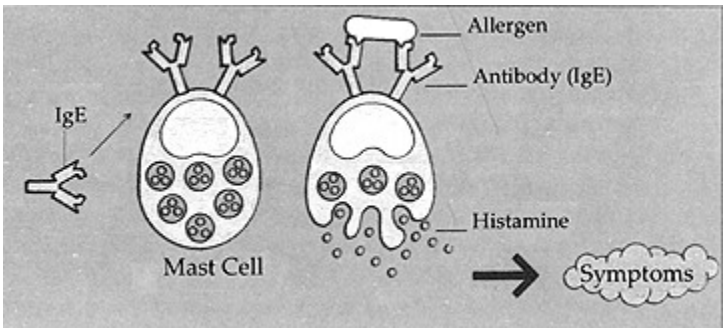
HEALTH NOTES by Evelyn Ames Achoo! Allergies

Now that the allergy season is upon us, and for some, it is always an allergy season, it is time to discuss seasonal allergies ("seasonal allergic rhinitis" or hay fever), principal allergens, symptoms, measures to reduce contact, and appropriate actions to alleviate sniffles/itching and all-around misery. Food allergies are not covered.

What is an allergy what are some common allergens? It is an altered immune response to an unusually otherwise harmless substance or re-exposure to the very same substance. The sensitization to a substance may be inhaled, injected, rubbed on the skin, or taken in by mouth. Common allergens include pollens, wool, molds, industrial chemicals, house dust (dust mites), animals (danders, urine, and saliva), drugs, feathers, insect venom, and factors such as temperature extremes and sunlight.

What happens in the body? When an allergy prone individual is first exposed to a particular allergen, he/she produces a protein called **IgE antibody** (a specific kind of antibody responsible for allergies). The person is primed for a future allergic response. The IgE antibodies attach to the surfaces of two types of cells known as the mast cells and basophils. Mast cells are found primarily in the respiratory and digestive tracts and the skin. Basophils are found in the blood. Each antibody will react only with a specific allergen. The combining of the allergen with its antibody is a signal to these cells to release *irritating chemicals,* known as *mediators*. These cause the various allergic symptoms. One of these chemicals, **histamine**, causes blood vessels to expand and leak fluids. This leads to swelling (edema). As an example of an allergen, consider house dust. It is not a single substance but a varied mixture of potential allergens such as fibers from different types of fabrics, cotton linters, feathers, molds and fungus spores (especially in damp areas), food particles, human dander, bits of plants and insects, hair and dander from pets, spider-like insects and dust mites (dead mites appear to be more aggravating than live ones). The pollens from ferns, trees, grasses and weeds (otherwise known as an unwanted plant) create discomfort for the allergic individual.



Symptoms of allergy often include congested or runny nose, itching and tearing of the eyes, tightening of airways leading to wheezing and shortness of breath, itching welts and other rashes on skin, and stomach and bowel problems such as cramps, vomiting, and loose stools. Allergic Rhinitis is one of the common allergy diseases. A person has a swollen nose and such common features as sneezing, itchy, runny and stuffy nose.

What can a person do? Check to see if local pollen and mold counts are high numbers. Some local media sources track levels of molds and pollens daily. The National Allergy Bureau of the American Academy of Allergy, Asthma and Immunology (not associated with NIH), reports current pollen and mold spore levels to the media and maintains a web site at http://www.aaaai.org/nab/. The National Institute on Allergy and Infectious Diseases suggests staying indoors in the morning when outdoor pollen levels are highest, wearing face masks designed to filter out pollen if you must be outdoors, keeping windows closed and using the air conditioner if possible in the house and car. NIAID recommends not drying clothes outdoors and avoid mowing grass or doing other yard work, if possible. Avoid unnecessary exposure to other environmental irritants such as insect sprays, tobacco smoke, air pollution, and fresh tar or paint. If your lifestyle is adversely affected and avoidance does not work, the use of medications can help control allergy symptoms. Antihistamines are usually the first line of defense since they counter the effects of histamine. There are side effects to antihistamines (e.g., drowsiness, loss of alertness and coordination) but newer antihistamines (and alas, more expensive) cause less drowsiness. A non-drug option is the use of a nasal saline solution to irrigate the nasal passages. If

allergy symptoms are annoying or are moderate to severe, it is recommended people work with their primary care provider in finding the best treatments. This might include topical nasal steroids which, when used at recommended doses, reduce mucus secretion and nasal swelling.

Allergy Resources: National Institute of Allergy and Infectious Diseases (allergy information), see http://www.niaid.nih.gov/publications/allergies.htm. For comprehensive allergy prevention strategies, see National Institute of Environmental Health Sciences at http://www.niehs.nih.gov/airborne/prevent/intro.html. Asthma can be a serious complication of allergy. Visit http://www.niaid.nih.gov/publications/asthma.htm. Fact sheet about sinusitis can be found at http://www.niaid.nih.gov/factsheets/sinusitis.htm.